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Other bulletins on foods and nutrition available from the United States Department of Agriculture—

Eat the right food to help keep you fit.
Three market lists for low-cost meals.
Market lists for moderate-cost and liberal meals.
Food for growth. (For children.)
Fight food waste in the home.
Meat for thrifty meals.
Dried fruits in low-cost meals.
Dried beans and peas in low-cost meals.
Green vegetables in low-cost meals.
Root vegetables in low-cost meals.
Soybeans for the table.
Home canning of fruits, vegetables, and meats.

Issued by

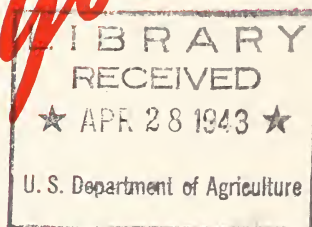
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*Vitamins
from
farm
to
you*



U. S. DEPARTMENT OF AGRICULTURE

AWI-2

VITAMIN A IN WAR AND PEACE

Vitamin A has a war nickname—the black-out vitamin.

This vitamin is needed for normal eyesight in dim light . . . it is important to air pilots . . . to fighting men . . . to people in darkened places.

When a person has too little A, his eyes cannot adjust quickly from bright light to darkness. This eye trouble is night blindness. The night-blind person may run into objects at night which a normal person would see.

Even in daylight a person with serious night blindness can't see well toward the right or left. This, too, may cause accidents. You need side-sight as well as front-sight when you walk, ride, or just stand still.

Vitamin A—in fact, all vitamins—help to protect against infections. A is one of the vitamins needed for growth, and for healthy teeth, bones, and nerves. Vitamin A is important for good skin and good linings to nose, mouth, and organs throughout the body.

Follow the Colors

Cows and chickens manufacture vitamin A in their bodies. So do fishes. And so do you.

You get vitamin A by eating ripe yellow and green vegetables and some red-colored ones . . . tomatoes, for example; also from liver, butter, and eggs. Bright colors in food are often—though not always—like flags, signaling with yellow, green, orange, or red, “This way for vitamin A.”

Store for the Future

You can store some vitamin A in your body for future use. A wise plan is to get a generous supply in your food each day, so you will have some to draw on, if you should get less in food at any time.

VITAMINS FOR MORALE

For a while one vitamin was called B. Then scientists learned that B was a large family of vitamins.

Now, one member is B₁. Better still, call it thiamine (rhyme “thi” with “my”).

Thiamine, nicknamed the morale vitamin, helps steady nerves . . . helps you to keep cheerful—with a stiff upper lip. People who get too little thiamine in food often have poor appetites, constipation, slow heart rate, a tired feeling.

Another of the B family is niacin, or nicotinic acid (not the same as nicotine). You need this vitamin to help nerves and digestion and for healthy skin.

Health Watchman

Niacin is probably the health watchman that does most to ward off pellagra, a disease that weakens thousands of people in our own country. Victims of pellagra have skin trouble, poor digestion, feel weak and tired, gloomy . . . a few even go insane. Pellagra can be prevented by eating enough foods containing B vitamins, particularly niacin.

A third B vitamin is riboflavin (“ri” rhymes with “why,” and “fla” with “way”). Riboflavin is needed for health and normal growth. If the body gets too little, ugly sores may form around nose and mouth—eyes see dimly and are bloodshot, and the light hurts.

Stay Above the Border

For one person in America who becomes out-and-out ill for lack of B vitamins, thousands are borderline cases.

Almost everyone can improve his health by eating more of the foods that have B vitamins. You get these vitamins in many foods.

VITAMIN **C** AGAINST SCURVY

Vitamin C is widely known by a longer name, ascorbic acid. This vitamin was one of the first discovered.

When you get enough vitamin C your body tissues are healthier . . . especially the bones, teeth, and gums.

Lesson From Sailors

For lack of this vitamin, sailors used to fall ill when they sailed on long voyages and ate no fresh food, just limited ship's rations day after day. Their strong muscles grew weak. Joints swelled and hurt. Gums bled.

In time seamen learned that if they took lemon, lime, or orange juice, they quickly recovered from this misery called scurvy. Raw green food such as cabbage also cured it. So the way to drive scurvy away was found long before scientists discovered vitamin C, the scurvy-fighter itself.

To keep babies safe from this condition and to help them to grow normally, mothers today give them vitamin C in some form . . . orange juice or canned tomato juice, usually.

Many people, young and old, get less vitamin C in their food than they should have for the best of health. They may escape actual illness, but they would be sturdier and feel more fit if they ate sufficient fruits and vegetables that carry this vitamin.

Eat As You Go

The body cannot store large amounts of vitamin C. You must get your supply day by day.

Canned tomatoes and citrus fruits contain practically as much vitamin C as fresh ones. So, some vitamin C may be kept on the shelf in canned foods ready for use.

VITAMIN **D** FOR FRAMEWORK

Vitamin D is a two-way vitamin. You can get it from foods and from sunshine.

For the Baby's Bones

Vitamin D helps bones and teeth to grow strong and straight. This is why babies and young children need a special supply of this vitamin regularly.

You may have heard someone say that a baby with bowlegs "walked too soon." It is known now that the real trouble isn't walking but too little vitamin D. When a child with bowlegs is given the vitamin D he needs, the bones will grow sturdier, though they may never be as firm and straight as if he'd had the right start.

Some people call vitamin D the sunshine vitamin. When sunlight meets the skin direct, vitamin D is formed in the skin.

Sunshine is good for babies . . . but avoid sunburn!

Children cannot get much vitamin D from sunshine when they need to bundle up warm for cold weather or when they live where clouds, fog, smoke, or dust form curtains against the sun.

From Sea and Land

Fortunately, many fish in the sea store up this vitamin in their livers along with vitamin A. Oils from fish livers are the foods most commonly used as a source of vitamin D.

For years the richest source of D known was cod-liver oil. Now it is known that livers of other fish, such as halibut, perch, and shark, have even richer supplies of vitamin D.

Whole milk has some vitamin D when Bossy stands in sunny pastures. Some dairies add vitamin D to milk.



How can I get the vitamins I need each day?

Eat the foods needed for all-round health, each day, and you will get the vitamins you need. Follow the Food for Freedom list at the left. Eat as much variety as you can. When Americans fail to eat a well-balanced diet, they are very apt to be short on the foods that carry vitamins. The chart below will help you plan meals that include the valuable vitamins A, B, C, and D.

FOOD FOR FREEDOM

It is important to eat the right food . . . important to you because you want to be well and feel well . . . important to the Nation because the United States depends on you to keep up health and strength to do your share.

If you raise your own food, you can have the right kinds without spending a great deal. If you can afford to buy what you like, you can afford to have what you need. If you must spend carefully to stretch a small income, it is all the more urgent for you to buy food wisely, get the most for your money.

For all-round health, keep in mind the following list of foods you need. The list is fitted to the yardstick of good nutrition adopted by the Nation's nutrition experts.

Try to have in your meals every day - -

MILK

For a growing child, $\frac{1}{2}$ to 1 quart.
For an expectant or nursing mother, 1 quart.
For other family members, 1 pint or more.

TOMATOES, ORANGES, GRAPEFRUIT, RAW CABBAGE, OR SALAD GREENS
1 or more servings.

GREEN OR YELLOW VEGETABLES
1 or more servings.

OTHER VEGETABLES OR FRUITS
2 or more servings. (Among these include your potatoes and apples.)

LEAN MEAT, POULTRY, FISH, OR SOME-TIMES DRIED BEANS OR PEAS
1 or more servings.

EGGS

1 a day or at least 3 or 4 a week cooked as you like or in made dishes.

CEREALS AND BREAD

2 or more servings of whole-grain or "enriched" products.

BUTTER AND OTHER FATS

When you eat a large variety of nourishing foods you get all the vitamins known. In addition—and this is important, too—you may be getting unknown vitamins in food . . . vitamins not yet discovered but working for you just the same.



Check shows vitamins in foods listed	A	Thiamine	Riboflavin	Niacin	C	D	Check shows vitamins in foods listed	A	Thiamine	Riboflavin	Niacin	C	D
DAIRY PRODUCTS, EGGS							VEGETABLES						
Butter.....	✓					✓	Asparagus, green.....	✓				✓	
Cheese.....	✓		✓				Beans, lima.....		✓	✓			
Cream.....	✓					✓	Beans, navy.....		✓	✓			
Eggs, whole.....	✓	✓	✓	✓	✓	✓	Beans, snap.....	✓	✓	✓		✓	
Egg yolk.....	✓	✓	✓	✓	✓	✓	Beet greens.....	✓	✓	✓			
Milk, whole.....	✓	✓	✓	✓	✓	✓	Brussels sprouts.....	✓	✓	✓		✓	
MEAT, POULTRY, FISH							Cabbage.....	✓	✓	✓	✓	✓	
Beef, lean.....	✓	✓	✓	✓			Carrrots.....	✓	✓	✓		✓	
Chicken.....	✓	✓	✓	✓			Cauliflower.....	✓	✓	✓		✓	
Codfish.....	✓	✓	✓	✓			Chard.....	✓	✓	✓		✓	
Fish-liver oils.....	✓	✓	✓	✓	✓	✓	Callards.....	✓	✓	✓	✓	✓	
Haddock.....	✓	✓	✓	✓			Corn, sweet.....	✓	✓	✓		✓	
Kidney.....	✓	✓	✓	✓	✓	✓	Cowpeas.....	✓	✓	✓		✓	
Liver.....	✓	✓	✓	✓	✓	✓	Dandelion greens.....	✓	✓	✓		✓	
Mutton, lean.....	✓	✓	✓	✓			Duck.....	✓	✓	✓		✓	
Pork, lean.....	✓	✓	✓	✓			Eggplant.....	✓	✓	✓		✓	
Roe, fish.....	✓	✓	✓	✓			Endive.....	✓	✓	✓		✓	
Salmon.....	✓	✓	✓	✓		✓	Kale.....	✓	✓	✓	✓	✓	
Sardines.....	✓	✓	✓	✓		✓	Kahlrabi.....	✓	✓	✓		✓	
FRUIT							Leeks.....	✓	✓	✓		✓	
Apples.....	✓	✓	✓		✓		Lettuce, green.....	✓	✓	✓		✓	
Apicats.....	✓	✓	✓		✓		Mushrooms.....	✓	✓	✓		✓	
Avocados.....	✓	✓	✓		✓		Mustard greens.....	✓	✓	✓	✓	✓	
Bananas.....	✓	✓	✓		✓		Okra.....	✓	✓	✓		✓	
Blackberries.....	✓	✓	✓		✓		Onions.....	✓	✓	✓		✓	
Blueberries.....	✓	✓	✓		✓		Parsnips.....	✓	✓	✓		✓	
Cantaloup.....	✓	✓	✓		✓		Peanuts.....	✓	✓	✓	✓	✓	
Cherries.....	✓	✓	✓		✓		Peas, dried.....	✓	✓	✓		✓	
Cranberries.....	✓	✓	✓		✓		Peas, green.....	✓	✓	✓	✓	✓	
Currants, black.....	✓	✓	✓		✓		Peppers, sweet.....	✓	✓	✓		✓	
Dates.....	✓	✓	✓		✓		Potatoes.....	✓	✓	✓		✓	
Figs.....	✓	✓	✓		✓		Radishes.....	✓	✓	✓		✓	
Gaoseberries.....	✓	✓	✓		✓		Rhubarb.....	✓	✓	✓		✓	
Grapefruit.....	✓	✓	✓		✓		Rutabagas.....	✓	✓	✓		✓	
Lemons.....	✓	✓	✓		✓		Saybeans.....	✓	✓	✓		✓	
Oranges.....	✓	✓	✓		✓		Spinach.....	✓	✓	✓	✓	✓	
Olives, green and ripe.....	✓	✓	✓		✓		Squash, yellow.....	✓	✓	✓		✓	
Peaches.....	✓	✓	✓		✓		Sweetpotatoes.....	✓	✓	✓		✓	
Pears.....	✓	✓	✓		✓		Tamatoes.....	✓	✓	✓	✓	✓	
Pineapples.....	✓	✓	✓		✓		Turnip greens.....	✓	✓	✓		✓	
Plums.....	✓	✓	✓		✓		Water cress.....	✓	✓	✓		✓	
Prunes.....	✓	✓	✓		✓		CEREALS						
Raspberries.....	✓	✓	✓		✓		Corn meal, yellow.....	✓	✓	✓			
Strawberries.....	✓	✓	✓		✓		Whole grains.....	✓	✓	✓			
Tongaines.....	✓	✓	✓		✓								
Watermelon.....	✓	✓	✓		✓								

VITAMINS IN THE KITCHEN

You don't want vitamins vanishing from foods right in your kitchen. It can happen, and the food won't show it.

Some vitamins get out into cooking water. This is true of B vitamins—thiamine, riboflavin, niacin. Vitamin C does this, too.

Heat destroys some vitamins, particularly thiamine and C.

Foods lose some vitamins while just waiting to be used. Vitamin A is slowly lost this way . . . vitamin C more rapidly.

You notice that C is the vitamin most damaged by heat and air. Take special care of fruits and vegetables rich in C so they can take care of you.

First Aid for Vitamins

Here are four first-aid rules for saving vitamins in food:

1. Don't crush or bruise.
2. Don't soak.
3. Keep cold until ready to cook or eat.
4. Use quickly when prepared.

Here are more detailed suggestions:

- Make raw salad or slaw as a last-minute job. Vitamin C gets away faster from foods peeled or cut.
- When you cook vegetables, use as little water as possible. Add salt to cooking water at the start, to help hold the vitamin C.
- Cook quickly whenever you can. Put vegetables into boiling water, and bring the water back to boiling point fast.
- Cook vegetables until just tender—but no longer.
- Stir vegetables only when you must. If you stir you mix air into the food and that destroys some of the vitamins.
- Do not add soda when you cook green vegetables. The soda destroys thiamine and vitamin C.
- Do not thaw frozen vegetables before you cook them.
- Serve raw frozen foods, such as fruits, at once, before thawing.
- Since cooking water takes up some of the vitamins and also minerals, it is good food. So, don't pour cooking water down the sink. Serve it with the vegetables . . . or in soups . . . sauces . . . gravies.

THIS WAY FOR YOUR VITAMINS

GET YOUR VITAMINS IN FOOD

You need vitamins. Everyone does—young and old. You need them for building a healthy body and for keeping fit and strong. Vitamins are especially important in a period of stress and strain.



THE VITAMIN ASSEMBLY LINE



The greatest vitamin factory on earth is a farm, for vitamins come to you from plants, animals, and sunshine.

When you eat a variety of good food grown on America's farms or in a home Victory garden, you get vitamins in their natural form.

The farm's vitamin assembly line runs from the ground up. Seeds are rich in certain vitamins. Green growing plants produce and hold vitamins or vitamin materials. Ripe fruits, vegetables, and grains bring the vitamins—along with other nourishment from the plants—to you.

Animals on the farm get vitamins from their feed and sunshine. Eggs, meat, and milk and other dairy products are all a part of the vitamin supply line that ends at your dining table.



SMALL BUT IMPORTANT

One thing is true of all the known vitamins: Tiny amounts handle big jobs. But tiny though these amounts are, they are essential for health.

Each of the vitamins has special work to do, helping the body to grow normally or to keep well and strong.

Because vitamins make up so small a part of food, for a long time no one dreamed they were there. You can't taste vitamins in food or smell them. For the most part you can't even see them in the food you eat, though one exception is this: The yellow color in many fruits and vegetables is carotene, the mother-substance of vitamin A.

Naming the Vitamins

When first discovered, vitamins did not seem to belong to well-known chemical families, as minerals in food do, for instance. So scientists called the orphans A, B, and so on a good way down the alphabet. Now vitamins are better known, and some have names that tell what they do or what they are like.

It is well to have a friendly acquaintance with vitamins A to D.